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ABSTRACT

A teaching/learning strategy called "Content-Field Synergy" (C-FS) promotes systematic instruction in the use of naturalistic inquiry as a higher order thinking strategy in social context. C-FS is a total course of study design that synthesizes and extends material from the required course text and lectures with observations from a "relevant slice of life." Undergraduate students in a reading methodology class at Corpus Christi State University in Texas compared the oral language, reading, and writing responses of a 3-year-old and a 6-year-old child by observing them in meaningful contexts and collecting reading, writing, and oral language samples. C-FS is conducted in four stages: (1) learning in the classroom; (2) observing and recording in a natural setting; (3) synthesizing all data and producing a manuscript; and (4) sharing the findings. A pilot study evaluated the C-FS strategy. Subjects, 81% of the 32 undergraduates enrolled in the prerequisite reading course during the 1991 second summer session, completed a survey concerning their perception of C-FS. Results indicated that: all respondents claimed that C-FS was relevant to the course; 92% claimed that it permitted freedom with guidance and enhanced their long-term memory; 81% said it enhanced their awareness of the real life situation as well as helped them to internalize text; and 73% claimed that it helped them to restructure their knowledge. (The course syllabus and a sample research paper using naturalistic inquiry are attached.) (RS)

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USING NATURALISTIC INQUIRY TO FOSTER HIGHER ORDER THINKING IN AN UNDERGRADUATE CLASSROOM

by

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In answering national calls for more emphasis on fostering thinking across the curriculum, researchers and practitioners have developed and validated numerous reading and thinking strategies over the past decade. According to Marzano (1991), most of these approaches have three aspects in common. First, they are grounded in two underlying principles of learning and cognition: (a) higher order thinking involves the restructuring of existing knowledge, and (b) knowledge restructuring is facilitated by tasks with specific characteristics. Second, most strategies are dependent upon the theoretical efforts of Piaget (1959), Rumelhart and Norman (1981), and Vosniadou and Brewer (1987) who generally agree that learning is a matter of changing one's existing knowledge and that knowledge restructuring is brought about by engaging in cognitive tasks that are meaningful, controlled by the learner, complex, and long term. Third, most strategies have been what Pearson and Johnston have called "text explicit" and "text implicit." Marzano further points out that the literature identifies decision-making, naturalistic inquiry, problem solving, scientific inquiry and composing as academic tasks that are not routine, but rather, they involve a number of cognitive operations that cannot be performed automatically. We are particulary interested in one of these non-routine tasks, namely, naturalistic inquiry.

Naturalistic inquiry is the process of developing and supporting an explanation for some past, present, or future event.

For example, in the case of this presentation, in RDG 320, an undergraduate reading methodology class at Corpus Christi State University, in which language and literacy acquisitions of young children are taught, students might research the differences in the oral language, reading, and writing responses of three-year-old children versus those of six-year-old children by observing such children in meaningful contexts and by collecting reading, writing and oral language samples. Going beyond text to personal experience, naturalistic inquiry facilitates higher level thinking because it forces the learner to generate hypotheses about events and then support the hypotheses using primary and secondary sources. Yet, a search of the literature reveals two things. First, few if any thinking strategies have been developed using naturalistic inquiry. Second, Vygotsky (1978) posited that all higher order psychological functions have social origins. Subsequently, social interaction must also be considered when developing thinking strategies for ecologically valid contexts. Therefore, the major purpose of this presentation is to introduce a basic format for promoting systematic instruction in the use of naturalistic inquiry as a higher order thinking strategy in social context, thereby, producing a synergy of text and experience.

Content-Field Synergy: A Format For Naturalistic Inquiry AS A Teaching/Learning Strategy

To date most teaching/learning strategies or teaching heuristics have been pre-reading designs, guided silent reading

designs, post-reading designs, or total lesson designs. These strategies have focused almost exclusively on getting knowledge from text. However, Piaget (1959) posited that there are two basic types of knowledge acquisition, one in which new knowledge is added to existing knowledge and another in which the existing knowledge base and those cognitive processes that operate on that knowledge base are altered structurally.

The teaching/learning strategy that I propose, Content-Field Synergy, takes both of these modes of knowledge acquisition into account. Content-Field Synergy (C-FS) is a total course of study design that synthesizes and extends what is expected to be learned from the required course text and lectures with what has been observed from a 'relevant slice of life'. It provides the teacher with a structure for teaching students how to conduct naturalistic inquiry. Based upon the interactive model of reading comprehension (Rumelhart, 1977) which views reading as an active, strategic process of questioning, predicting, confirming, and self-correcting, this design emphasizes strategic teaching (i. e., direct, guided instruction) as well as the special benefits of heuristics (self-discovery procedures). In other words, 'book-learning' is enhanced by 'real life experience', and synergistic learning, or learning in which the total effect is greater than the sum of the individual efforts results. I further contend that such an approach may be applied to many content areas, thereby, making learning more meaningful, relevant, and complex rather than being what Doyle (1983) characterizes content

learning in general --performing 'short-term, teacher-directed tasks that are cognitively quite simple and usually oriented to recall'. Further, C-FS permits students to question, predict, confirm, and self-correct as they construct and reconstruct knowledge. Thus, three types of learning take place --(1) formal learning from written and oral text, (2) experiential learning from the observation experience, and finally, (3) synergistic learning as a result of reflection and action upon the previous two types of learning. The purpose of this total course of study design is to give teachers a basic format from which to provide systematic instruction in knowledge restructuring through naturalistic inquiry to promote higher order thinking skills such as generating inquiry questions or hypotheses, identifying evaluative criteria, identifying primary and secondary sources, drawing conclusions, articulating relationships between the information and conclusions, and identifying the extent to which the final explanation meet the criteria.

Content-Field Synergy (C-FS) is conducted in four stages: (1) learning in the classroom, (2) observing and recording in a natural setting, (3) synthesizing all data and producing a manuscript, and (3) sharing the findings. Based upon the guidelines for naturalistic inquiry as set forth by Bogdan and Biklen (1982), the procedures for each stage of C-FS are as follows.

Stage I. Learning in the Classroom

1. During the first class session briefly introduce Content-Field Synergy in relation to the requirements of the course.

2. Throughout the semester or quarter, present information from the text in the customary lecture format noting significant supporting research. Have students read and discuss the text.

3. After sufficient content has been covered (about one third to one half of the text), pose an inquiry question or hypothesis regarding the course content. (Ideally, students should pose the question they want to study, but first time assistance may be needed.) Give students guidelines regarding desired participants, observation sites, type of information to record, kind of products to gather, and criteria to judge products.

4. For a permanent record, direct students to audiotape each observation.

Stage II. Observing and Recording in a Natural Setting

1. Develop profiles of those being observed by obtaining relevant personal information such as sex, age, schooling, family members.

2. In relevant contexts, observe and audiotape participants performing. Make pencil drawings of the setting as well as describe it in words.

3. Make notes regarding who is involved in an event, in what manner, and the nature of the action. Include a detailed description of the participants' behaviors (include yourself) and the sequence of those behaviors.

4. Transcribe the audiotape as soon as possible after each observation.

5. Reflect upon course content, field notes, transcriptions, and participant products. Speculate about what you are learning, the themes and patterns that are emerging, and the connections among the pieces of data. Note the problems and joys you are having with the participant(s), and include your ideas for dealing with the problems. Clarify notes that are confusing.

Stage III. Synthesizing Data and Producing a Manuscript

1. After observations are complete, study all data searching for topics and patterns that stand out. These become the coding categories.

2. Using these categories, code all data with a pencil. After making a copy of the coded data, cut up the notes and place them in their proper categories.

3. Review each category to determine what you want to tell your reader (the focus). Present the focus in a statement of purpose. Formulate a title that also reveals the focus.

4. Develop an introduction by stating the assignment you are fulfilling and describing the format design of the paper. Also tell techniques you used, time and length of study, number of settings and participants, and nature of the study.

5. In the core of the paper, present the theme and illuminate your topic. Using your notes or coded data, tell what you have seen and heard. Document this by including quotes and short excerpts from the field notes.

6. End the paper with a conclusion by restating focus and reviewing arguments OR by elaborating implications of what has been presented. Create a bibliography.

Stage IV. Sharing the Findings

1. Near the end of the course of study as manuscripts near completion, provide opportunities for students to discuss their findings in small groups and as a total class. Explore the relationship between text and experience.

Evaluating Content-Field Synergy As A Teaching/Learning Strategy

Thirty-two undergraduates (N = 32) enrolled in a prerequisite reading course in the teacher preparation program at Corpus Christi State University during 1991 Summer Session II participated in a pilot study. Midpoint in the course, students were directed to locate, observe and work with one preschool child and one kindergarten or first grade child in appropriate contexts to obtain authentic samples of the children's talk, reading and writing to determine whether there is a difference in the language and literacy perceptions and performance of the two children. Students were provided with Primary Language Record sheets (ILEA Center for Language in Primary Education, 1983) to assist them in gathering and categorizing data, criteria for evaluating data, and guidelines for the final paper. See Appendix A for a copy of the syllabus and directions for gathering data.

Two months after they had received their grades, participants were surveyed to determine their perception of C-FS. Eighty-one percent of the students responded. Major results of that questionnaire reveal that 100% of respondents claim that C-FS was relevant to the course, 92% claim that it permitted freedom with guidance and enhanced their long term memory, 81% say it enhanced their awareness of the real life situation as well as helped them to internalize text, and 73% claim that it helped them to restructure their knowledge.

Due to these positive results, a quasi-experimental study to validate C-FS as a teaching/learning strategy has been initiated.

Educational Importance of Content-Field Synergy

Unlike most teaching/learning strategies that focus almost exclusively on getting knowledge from text, C-FS is a total course of study design that proposes to bring about a synergy of what is learned from text with what is learned from an observational experience. Thus, the educational importance of C-FS (once it has been found to be a valid teaching/learning strategy) is that it will provide teachers and students with a format for knowledge restructuring through naturalistic inquiry that promotes higher order thinking skills such as generating inquiry questions or hypotheses, identifying evaluative criteria, identifying primary and secondary sources, drawing conclusions, articulating relationships between information and conclusions, identifying the extent to which final explanations meet the criteria and finally, synthesizing all of these into a logical whole.

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APPENDIX A

Course Syllabus for RDG320 Reading and the Language Process

CORPUS CHRISTI STATE UNIVERSITY
College of Education
COURSE SYLLABUS
Reading 320

COURSE TITLE: Reading and The Language Process

COURSE DESCRIPTION: Students are provided with a knowledge of oral language and writing skills. Emphasis is on the relationship of spelling, listening, and speech patterns of the English language to reading.

COURSE TEXTBOOK: The Development of Language and Literacy in Young Children (Third Edition) by Susanna W. Pflaum.

COURSE OBJECTIVES include:

1. An understanding of the theories of oral language readiness and the dreading process.
2. An understanding of the development and retention of oral language systems.
3. An understanding of the relationship of language storage to word association.
4. An understanding of long term and short term memory to language storage.
5. An understanding of the various models of oral language development.
6. An understanding of the relationship between oral language development and learning to read.
7. An understanding of the research in oral language development and learning to read.
8. An understanding of the relationship between writing and spelling patterns and learning to read.
9. An understanding of the relationship between listening and learning to comprehend what one reads.
10. An understanding of language differences in the bilingual learner.

COURSE REQUIREMENTS: Each student will

1. (100 pts.) Complete one naturalistic inquiry as directed.
2. (50 pts.) Complete an mid-term exam (essay form).
3. (50 pts.) Complete a final exam (multiple choice form).

DIRECTIONS FOR A NATURALISTIC INQUIRY PAPER

Inquiry Question: What are the differences in the language and literacy development of a three year old child and a six year old child?

Procedures:

1. Locate 2 young children, one who is a preschool child (3-4 years old) and one who has just completed kindergarten or first grade (5-6 years old).

2. Spend some time observing, audio-taping, and working with each child getting authentic samples of the child's conversation and work. (See the lists below for examples.)

3. Make notes of everything that occurs as it occurs and later transfer your notes to the Primary Language Record form. Also collect relevant personal information (sex, age, schooling, family members, education and occupations of parents).

4. Transcribe the tapes into field notes of what happened and what was said. (Write down the direct quotes.)

5. Using all information gathered, write a research paper by

   a. developing a profile of each child;

   b. contrasting the language and literacy of the two children (i.e., their talk and actions);

   c. enriching the text of your paper with direct quotes from the children;

   d. determining the reading, writing and language levels of each child using the provided criteria; and

   e. describing experiences and instruction that would advance the language and literacy development of each child.

Opportunities for Meaningful Talk

Morning dressing and feeding
Errands and travel by car, bus, etc.)
Visits to and from people
Trip to preschool, doctor, dentist, etc.
Laundry or other chores
Lunch or nap preparation
Return of siblings and others for supper
Mealtime talk
Explanations about TV programs
Bathing
Playing with a friend or sibling
Talk before bed

Opportunities for Writing and Reading. Please do all of these, and include them in your PLR.

Ask each child to

1. Draw a picture of him/her self.
2. Write his/her name.
3. Write the letters of the alphabet.
4. Answer questions about a book that you have read to the child.
5. Read a book to you.
6. Tell you a story about a picture in a book.
7. Tell you a story.
8. Write a story for you.

CRITERIA FOR ASSESSING CHILDREN'S WORK SAMPLES

Language Criteria: Refer to Brown's stages of development found in Chapter 2 (pp. 26-48) of class textbook.

Writing Criteria: Refer to Sulzby's list on page 66 of text.

Reading Criteria: Refer to Sulzby's storybook reading classification scheme as found in The Reading Teacher, 44(7), March 1991.

APPENDIX B

Sample Research Paper Using Naturalistic Inquiry

LANGUAGE AND LITERACY DEVELOPMENT:

A COMPARISON OF TWO CHILDREN

By

Gayla Cockerham

Dr. Helen Gill

Reading 320

August 8, 1991

Note. Permission has been granted by author to use this manuscript as an example of Content-Field Synergy.

LANGUAGE AND LITERACY DEVELOPMENT;

A COMPARISON OF TWO CHILDREN

The following is a comparative paper of the language and literacy development of two children (Nicholas, age 3, and Meghan, age 6) completed during the summer of 1991. Included are three basic sections divided as follows:

(1) Part I gives a brief description of and background information on each child;

(2) Part II describes the language and literacy development of each child; and

(3) Part III brings the findings of all observations and activities together by comparing and contrasting the two children.

PART I - BACKGROUND AND DESCRIPTIVE INFORMATION

Nicholas was born on June 4, 1988, and is currently 3 years and 2 months old. He has bright, inquisitive blue eyes and blonde hair. He is a Caucasian male and lives with his parents in a small town in South Texas. Though his parents plan to have more children, he is now an only child. His father is a student in the Education Department at Corpus Christi State University and will graduate in May, 1992. His mother graduated from Baylor University four years ago and provides the family income as a fifth grade Chapter I teacher. Nicholas can be described as a very typical, very active, very bright-eyed little boy. He can be very aggressive at times, especially when in the presence of other children. He is naturally curious and retains new information quite well. He likes to watch action-packed television shows and play physical "games" (sword fighting and wrestling) and enjoys being read to by anyone.

Meghan was born on May 17, 1985, and is currently 6 years and 3 months old. She has bright blue eyes and blond hair. She is a Caucasian female and lives with her parents and two older brothers in a small South Texas town. Her father

graduated from Texas A&M University in May, 1977, and currently manages a grain elevator. Her mother graduated from Tarleton State University in May, 1990, and is currently seeking elementary certification at Corpus Christi State University. Meghan is a very expressive little girl. She loves to talk to anyone who will listen. She is always eager to please and seems to be a perfectionist when completing any task. She likes to play with her Barbie dolls and her dog, Sandy, and enjoys writing creatively.

PART II - LANGUAGE AND LITERACY DEVELOPMENT

This section describes the language and literacy (reading and writing) development of each child in turn. These descriptions have been derived from activities performed by each child, from conversations with and observations of each child, and from information supplied by family members. The examples often given in parenthesis or used in quotation marks are specific quotes made by the child while being observed.

Nicholas

In observing Nicholas's language development the first and most obvious thing noticeable is his frequent use of consonant substitutions of initial sounds in words. For example, he substitutes "d" for "g" and "th" causing words such as "that," "gonna (going to)," and my name, "Gayla," to become "dat," "donna," and "Dayla." He also frequently drops the initial consonant "s" to cause words such as "snake" and "sneeze" to become "nake" and "neeze." These types of articulatory discrepancies are common to many young children and, therefore, should not be considered a problem at this early age. The only problem it presented in these observations was this observer's inability to understand some of Nicholas's utterances; translations were often provided, however, by the other observed child (Meghan) who seemed to understand perfectly what Nicholas said.

Though Nicholas cannot yet articulate all the phonemes of the English language, he has learned much about communication in three years time. He knows how to formulate simple, yet grammatically correct, sentences and how to ask questions. (He is particularly well adept at the latter.) He has acquired the ability to use pronouns in place of proper nouns (example: "See dat fox? He's donna eat dat chicken!") and to use the possessive form of nouns (example: "Dat's Meghan's paper.") He has a vocabulary that is probably normal for a child his age. In addition he has developed other ways of communicating when vocabulary alone is not sufficient. If by using his own lexicon, he is still unable to express his thoughts and feelings, Nicholas has command of various speech features such as intonation, stress, and pitch that help to relay feelings of excitement, anger, happiness, and sadness. These are often accompanied by nonverbal cues such a gestures and facial expressions that further enhance his ability to communicate effectively.

Nicholas's reading development can be most accurately classified under the first broad category of Sulzby's reading classification scheme. When "reading" the book, Rosie's Walk, he was mostly attending to the picture in view. His "story" consisted primarily of labelling and commenting on the pictures and of following the action of the story as detected through the pictures. He did not sound as if he was reading a story.

Though Nicholas is not yet a "real reader," he appears to be using several reading strategies. For example, Nicholas drew on his own experiences as a strategy as we read through the book together. He would name the various animals and objects that he knew. After he had named one animal, a goat, he stopped naming and told about seeing a goat in a fence one time while with his mother. Though Nicholas did not seem to be aware of the words on the page as we read, he was able to point to the text when specifically asked to do so.

First of all, this shows his knowledge of the difference between printed words and pictures. Second, it should be noted that each time Nicholas was asked to point to the text, he would place his finger at the beginning (left-hand side) of the text which is a good indicator of his knowledge of directionality, a beginning strategy or skill when learning to focus on print. Nicholas also used the prediction cycle as a strategy when reading the book by himself. He would ask, "And din (then) what happened?," to himself, answer his own question, and then turn the page to find out what did indeed happen.

Nicholas seemed to thoroughly enjoy the book. He wanted to read it several times. Each time he gained a little more confidence and became more independent in "reading" the book with fewer and fewer prompts by me. He needs more of these kinds of reading experiences (and his parents do read to him daily) to move him to the next level of reading which includes forming oral stories. Perhaps more opportunities to retell stories in books or make up his own stories will help to move him forward.

Though Nicholas did seem to be more interested and maintained a longer attention span during the book reading activity, he readily participated in the writing activity. His writings resemble those of children in the scribble stage, but there is a marked difference between his pictures, his alphabet, and his name. The attached samples are labelled and also include a two-sentence story dictated by Nicholas about his picture.

In Sample I the large circular shapes are Nicholas's picture of himself. If one looks carefully a large head with two large eyes and a large body can be detected. Nicholas's alphabet is also on Sample I. It consists of ten horizontal lines made from left to right which again is evidence of his knowledge of directionality. Sample II contains Nicholas's story about a snake. Near the bottom of the page are four distinct smaller shapes which represent his name.

These writings indicate that Nicholas is in the earliest phases of the prephonemic stage (Stage I) of writing. As he learns to form letters with adult guidance and encouragement, he will progress forward through the prephonemic stage and into the initial letter-name writing stage (Stage II). In order to do this he needs to be provided with various kinds of writing utensils and materials with which to experiment and many opportunities to write.

Meghan

One of the first things observable in Meghan's language development is how precise it is. She speaks very clearly and articulates all phonemes accurately. She is able to form complex sentences with no observable grammatical errors and uses adult-like words such as "actually," "obviously," and "despicable."

She loves to talk about anything and everything and apparently is given many opportunities to do so at home. Her parents talk to her in an adult-like manner and encourage her to describe her feelings and relate her experiences. Her parents say that one problem they are currently having with Meghan is her tendency to interrupt others when she wants to talk. Possibly this is because of her position as the baby of the family and is her way of vying for attention or recognition over her two older brothers. Her two brothers say that she talks too much , is a "blabber-mouth," and asks too many questions when they are watching television or playing Ninetendo. (Brothers will be brothers!)

She seems to be a very expressive little girl and has an excellent vocabulary for describing objects and her own feelings, as well as the feelings of others. Maybe this is a result of her natural tendency to question and demand clarification of things she does not understand. For example, several times when in conversation with her or when giving instruction for obtaining reading and writing samples she would say, "I don't understand what you mean," or "Tell me again." These statements may be evidence of early metacognitive forces

already in place in Meghan's repertoire of thinking skills. In other words, she took in information presented by me, thought about it, realized that she did not understand the information, and then asked for clarification.

Meghan's reading development falls somewhere in category five of Sulzby's reading classification scheme. She definitely is attending to print when she reads and sometimes becomes frustrated or refuses to read certain words based on the fact that the word is not familiar. She, of course, is aware of directionality of text and demonstrates one-to-one correspondence as she points to each word and reads it. She knows many, perhaps seventy-five or more, sight words.

When encountering an unknown word Meghan first asks the adult listener what the word is. If encouraged to figure if out for herself she usually resorts to graphophonic clues or may look at the accompanying picture for clues. Occassionally, she did appear to use context clues (semantics and syntactics) to read unfamiliar words, but for the most part, she seems to rely most heavily on graphophonics as a strategy for reading new words.

Meghan enjoys her new-found skill of reading which blossomed during the second half of kindergarten this past school year. Though she can be considered a "real reader," she still needs much adult help and supervision as well as lots of opportunities for practice. With these and a generous supply of "I Can Read" books Meghan should be well on her way to a more independent level of reading.

Writing seems to be another exciting new skill for Meghan, and she loves to do it when allowed to do so in an informal, unstructured situation. In the structured situation set up to obtain a writing sample, Meghan had very little confidence and had lots of anxiety over completing the task. She seemed to get hung up on her perceived imperfections of her ability to form letters correctly and to draw a picture of herself. She was constantly erasing and asked to start

over twice. She was almost in tears when she said, "But I want to do it perfect. The eyes look dumb. I keep messing up on the eyes." At this point I attempted to end the session, but she was determined to finish. The attached Sample III shows the final product of her endeavors. I was truly concerned about Meghan's reaction to the writing activity. After talking with her parents it seems that her kindergarten teacher put a lot of emphasis on perfect formation of her letters and numbers. Although it is not my intent to criticize this method, I think Meghan might benefit from more creative types of writing such as journal or story writing. These might help her to get her ideas down on paper with less anxiety, or else her creativity and confidence may both be in jeopardy if too much continued emphasis is placed on erasing to achieve perfection.

I am pleased to include an additional Sample IV, which is also Meghan's work, done spontaneously by her when playing alone in her room. It provides an excellent example of invented spelling. In this sample invented spellings are mixed with several conventional spellings. There is one instance where a word is spelled correctly in one instance and incorrectly in another. (The "the" in sentence 1 is spelled correctly; it is spelled "V" in sentence 2.) Actually, what happened was that Meghan had written sentence 2 first and had spelled "the" incorrectly. She then asked her mother how to spell "the" and wrote it correctly in sentence 1 which was actually written second. This accounts for the inconsistency in her spelling. All of the /p/ sounds are written as "B." This may be a result of the fact that both the letters "B" and "P" have similar mouth positions when pronouncing the sounds they make. Interestingly, some of Meghan's knowledge of reading has not found its way into her invented spellings. She does not use word spacing or any type of punctuation in her writings though these are a vital part of reading.

Meghan appears to be in the syllabic stage (Stage III) of writing because she includes more than just the initial letter sounds common to Stage II. She may be in transition to the phonemic spelling state because she is aware that words have certain correct spellings.

PART III - COMPARATIVE AND CONTRASTIVE FINDINGS

Both Meghan and Nicholas come from relatively the same socioeconomic backgrounds and have educated parents who love and support them and who read to them daily. Both children appear to be normal and of average intelligence for their age and stage of development. Both were bright, willing to cooperate for these observations, and a pleasure to work with.

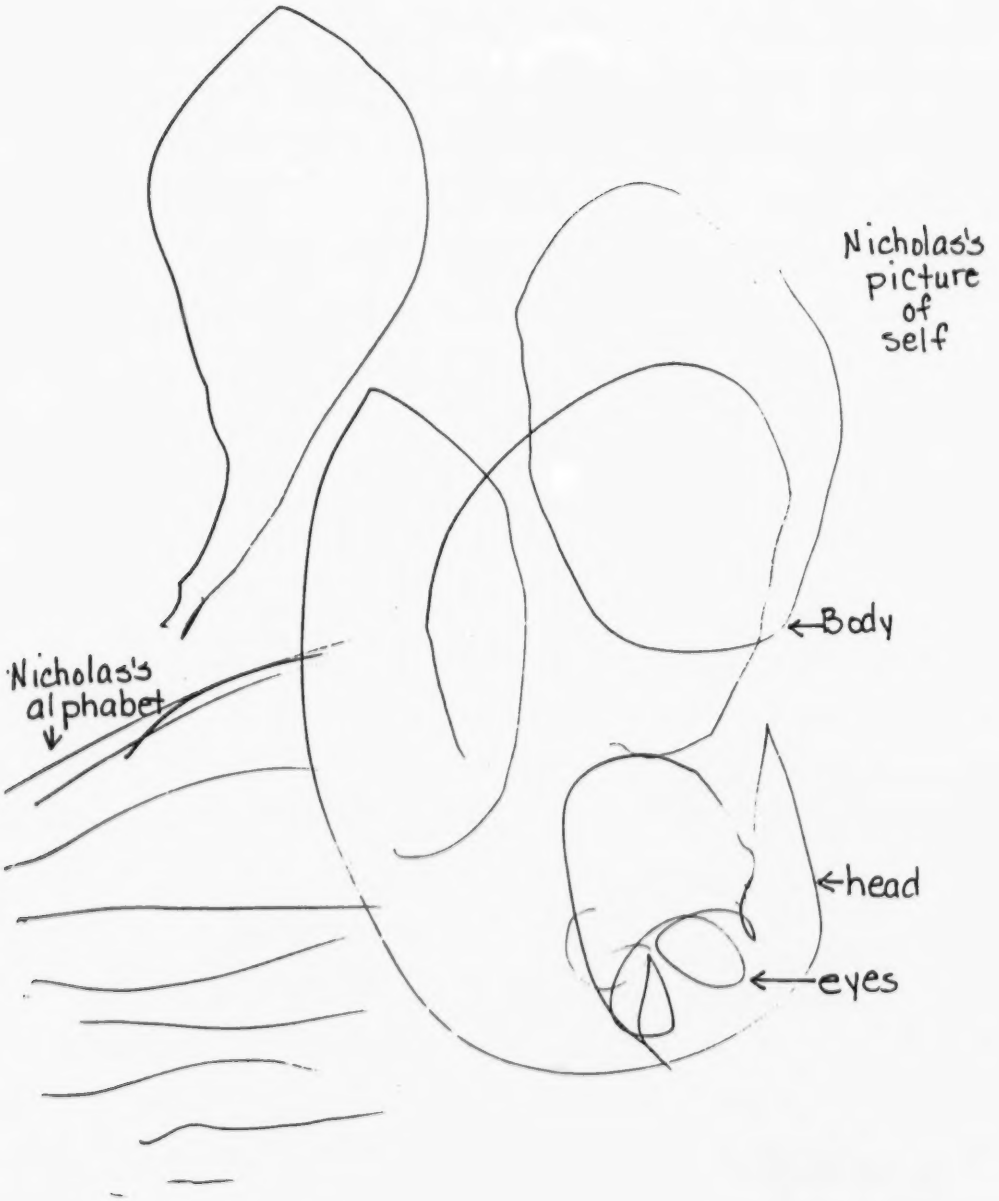
In regard to language development both children are able to communicate effectively. Both love to talk and ask questions about their world. The main differences lie in the way in which they communicate and the extent of their communication tools. Nicholas has minor articulation discrepancies as opposed to Meghan's precise speech. Nicholas's utterances are more object-and action-oriented and are often more egocentric (self-centered) in nature; whereas, Meghan's utterances are more descriptive and affectively oriented. She is more empathetic for others and less focused on self than Nicholas. Meghan's vocabulary is larger than Nicholas's vocabulary. All of these differences can be attributed to the differences in the age and stage of development of these two children. Another possible reason for Nicholas's action-oriented and Meghan's feelings-oriented responses is the fact that little boys and girls are often treated differently in our society. Boys are encouraged to be more physical and aggressive. Girls, on the other hand, are expected to express their feelings and emotions.

In literacy development both children, again, appear to be normal for their age and stage of development. When given a choice Nicholas seemed to prefer reading over writing while Meghan seemed to prefer writing over reading depending on the situation. In reading the two children are at opposite ends of Sulzby's reading classification scheme. While Nicholas attends primarily to the pictures in books, Meghan attends to print (text). In writing development Meghan has

become aware of the sound/symbol relationship between writing and speaking. She is able to form letters correctly and to use them to represent words. Nicholas, though he knows many letters of the alphabet, has not yet made this discovery; therefore, his writings consist of scribbles and random marks on the page. As he develops and refines his fine motor skills and becomes aware that letters are used to represent the spoken word, he too will develop his writing skills as Meghan has.

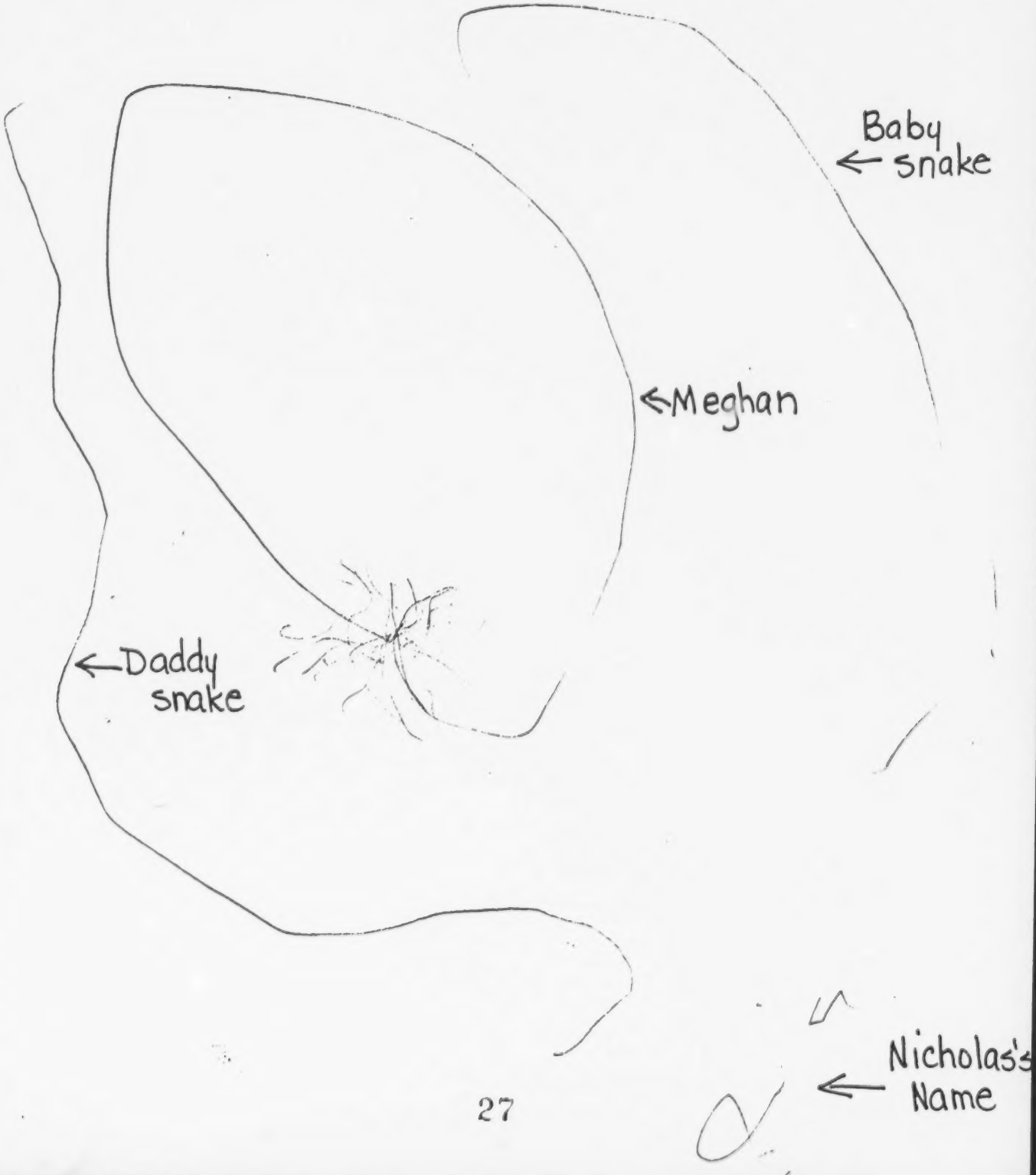
It would be extremely interesting to study these children again in three years when Nicholas is six and Meghan is nine. I'm sure that major progress would be evident in the language and literacy development of both children. It would be interesting also to compare Nicholas's achievements at age 6 with those of Meghan at the time of these observations, but that is for another study and another time. For now this observer has gained some very useful and valuable insights---insights that will hopefully be beneficial in my future career as a teacher of young children.

Sample I


Nicholas's picture of self
Body
Nicholas's alphabet
head
eyes

This is a snake.
He wants to eat Meghan.

Sample II



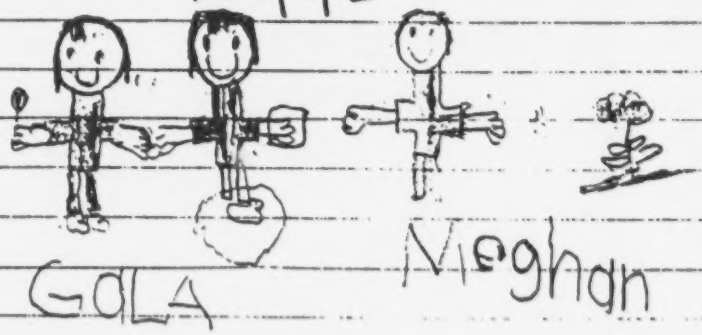
Sample III

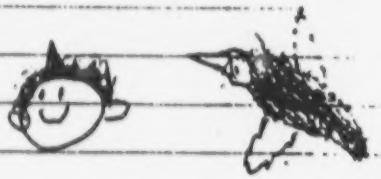
Megan

ABCDEFGHIJKLMNOPQRSTUVWXYZ

Sample IV

1. MOMsWustotheMovs
2. MaMcanBLavBaO
3. MoMsnis
4. MoMBLasWilSAB





1. Mom is going with us to the movies.
   MOM s w us to the movs
2. Mom can play the piano.
   Mom can bla v bao
3. Mom is nice.
   Mom s nis
4. Mom plays with little Sandy.
   Mom blas w l Sab

Words underlined were spelled correctly by Meghan.